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SANITARY COUNCIL OF
MISS. VALLEY

MINUTES OF MEETING

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MINUTES OF THE MEETING OF ORGANIZATION

AND

PROCEEDINGS

OF THE

SANITARY COUNCIL

64

OF THE

MISSISSIPPI VALLEY.

Memphis, April 30th, May 1st; Atlanta, May 5th-9th.

CHICAGO, ILL.

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WITH the memory of the epidemic of 1878 still fresh in the minds of the people of the Mississippi Valley, the present seems a most opportune time in which to organize and concentrate the individual efforts and attention which were aroused by that terrible visitation. The magnitude of the interests involved—not alone of commerce and industry, but of life itself—has been realized as never before; and the opportunity of sanitary science to demonstrate its value as a conservator of those interests is one which it is incumbent upon sanitary organizations to utilize to the fullest extent.

Until the National Government, through a national agency, wielding the power and supported by the authority of the nation, shall assume plenary control of questions affecting the public health, it can only be by the harmonious and conjoint action of the various local agencies, State and municipal, that we can hope to secure exemption from epidemic diseases. Recognizing this fact, and appreciating the urgency of prompt action, the proceedings detailed in the following pages have been had, and this occasion is taken to felicitate the communities of the West and Southwest upon the promise of future immunity to be found in this action.

It is not alone in averting or controlling the spread of epidemic disease, however, that the influence of the SANITARY COUNCIL will be productive of good. In directing and promoting general sanitation, in enforcing health regulations, in increasing and diffusing a knowledge of hygienic observances, and in attracting public attention to these subjects, the work of the COUNCIL will be fraught with benefit to the community, not less important because less obvious than its avowed object. Through such measures, the tone of the general health will be improved; and thus, not only epidemic, but all, diseases may be rendered less virulent, less frequent, and less fatal. This aspect of the subject is one which it is conceived may be profitably exploited by the public press; and it is urged upon each individual member of the various local sanitary organizations in the Valley, that his influence be brought to bear in this direction.

Domestic sanitation should be encouraged in every feasible method; this, in fact, must be the basis of all improvement, and to this end the Secretary has prepared and forwarded Sanitary Inspection Blanks for the inspection of upward of 70,000 houses. It is urgently requested that such inspection, and the abatement of nuisances thereby disclosed, be pressed with unremitting energy, so that by July 1, at the latest, the households of the Valley of the Mississippi shall be placed in the best possible sanitary condition. These blanks, when filled and the nuisances discovered have been abated, should be returned promptly to the office of the Secretary in Chicago; and in estimating the population seven persons to each house may be assumed as the basis.

The example of New Orleans and Memphis in pushing sanitary work by local voluntary subscriptions and effort, is commended to other cities and towns whose municipal authorities have neglected or are unable to make adequate appropriation for such work. The emergency is too imminent to allow of mincing matters;

it must be met promptly and energetically. If means are not available from one source, they must be sought from another. Meanwhile, the pressure of public opinion by petitions, addresses, personal appeal, etc., should be brought to bear upon legislative and kindred bodies to secure from them such legal enactments, and the provisions for their enforcement, as may be necessary. The Illinois Legislature has been thus induced to make a special appropriation for the specific work of guarding against the introduction of epidemic disease, a danger to which the State, from her geographical position, is threatened whenever such disease appears on the Lower Mississippi.*

Attention is also asked to the resolutions and recommendations of the COUNCIL concerning travel and traffic by rail and river. It is believed to be entirely feasible to secure the active co-operation of railroad and steamboat officials in carrying these measures into effect, if they are properly and intelligently brought to their notice. Whilst sufficient authority is possessed by the State and local boards to secure compliance with their requirements, it is desirable that such compliance be spontaneous and voluntary, instead of enforced and reluctant.

In conclusion, the necessity for earnest, prompt and efficient action, not only by authorities and officials, but by the people individually, cannot be too strongly insisted upon, if we would be spared a repetition of the terrible lesson of last year.

It is not necessary to wait for municipal, State or National action or appropriation. Every householder should see that his or her premises and surroundings are placed in the best possible sanitary condition without delay. Without such individual effort and interest, all else will be of little avail, since there is a clearly defined limit beyond which neither State nor municipal authority can extend. *Each for himself must realize that, in sanitary matters at least, he is his "brother's keeper," and must act upon that conviction forthwith.*

JOHN H. RAUCH, M. D., *Secretary.*

CHICAGO, May 24, 1879.

* A meeting of the State Board of Health has been called for an early day, at which to take action looking to giving practical effect to the deliberations and recommendations of the SANITARY COUNCIL. J. H. R.

ORGANIZATION

OF THE

Sanitary Council of the Mississippi Valley.

MEMPHIS, Tenn., April 30, 1879.—In response to the appended preamble and resolution of the Board of Health of the State of Tennessee, a number of accredited representatives of Western and Southern State Boards of Health and sanitary organizations assembled this day in the rooms of the Howard Association, in the city of Memphis, and the proceedings hereinafter recited were had.

The meeting was called to order by Dr. J. D. Plunket, President of the Tennessee State Board of Health, at whose request, the Rev. W. E. Boggs, of Memphis, prefaced the proceedings with an earnest prayer. The following preamble and resolution, adopted at a meeting held in Nashville, Tenn., were then read :

WHEREAS, There is an uneasiness felt among the people of the entire Mississippi Valley lest the approaching summer may witness another visitation of yellow fever in that region ; and,

WHEREAS, The National Board of Health has not yet been clothed with sufficient authority to make its action available should an emergency arise ; therefore, be it

Resolved, That this Board do invite a conference of representatives of all the State Boards of Health located in the Mississippi Valley, to be held in Memphis April 30, 1879, for the purpose of counseling together and arranging a definite plan of co-operation, should events render it necessary to establish quarantine.

J. D. PLUNKET, M. D.,

President Tennessee State Board of Health.

W. M. CLARK, M. D., *Secretary.*

Dr. Plunket, in further explanation of the call, spoke as follows :

GENTLEMEN :

Less than one short year ago, upon this historic ground, there was enacted a tragedy which has no parallel in the annals of this country, and but few in the annals of mankind; a tragedy, the principal actor in which was the insatiate monster, Death. Along these streets and in these homes the heavy shadows of his dark wings fell, sweeping often into one common grave whole families, from the gray-haired sire down to the little babe which nestled in the crib. The very atmosphere was thick with his poisonous shafts, and it seemed inevitable that Memphis, the beautiful and thriving city of the great valley, was doomed to witness the extinction of her every son and daughter. Here the wail of anguish and suffering went up from childless parents, parentless children, husbandless wives and wifeless husbands, until it touched the great humane heart of Christendom, and the fountains of charity were opened up, and in a broad, steady stream flowed from every section; often coming in the form of a brave, philanthropic man, a fearless, devoted woman, or in limitless quantities of money or supplies to meet the wants of the suffering and to sustain the strength of the well. It was here that heroes and heroines were born; it was here that they died.

To prevent the re-enactment of such a heart-rending experience in the Mississippi Valley is within the power of a well-ordered system of inter-State sanitary police, efficiently carried out. Wherefore, as representatives of the several States lying along the Mississippi and its tributaries, we have convened at this time for the purpose of taking counsel, the one of the other, and arranging, so far as may be, the details of such a system. Thoroughly organized, we will be enabled to meet the foe at the very threshold, and by prompt, intelligent action there is every reason to expect its utter annihilation. These extreme outposts are, by preference, our fields of battle, and it is upon them that the greatest victories must be won or lost. Through organization, we can concentrate upon every such threatened or invaded point the greatest power, both State and National, and, in consequence, be enabled thereby to secure results which, in some measure, will reflect back to Europe the brilliant demonstration recently given the world of the capabilities of sanitary science when intelligence directs and ample means are supplied it.

To study, with anxious care, the influence upon the public health of this great continental sewer, as it sweeps along through 3,000 miles in its downward course to the sea, is a duty and a responsibility devolved upon us by our geographical position, as well as by our official character. It is upon the broad and ever-widening bosom of this mighty river that the great carriers of commerce find ingress and egress, bringing into our country not only the products of the world, but also the people of every race and nationality, with their idiosyncrasies of mind and body, and often the peculiar diseases of their native lands, regarding which we, as guardians of the public health, are most directly concerned.

In such study there must, of necessity, be a careful and thorough consideration of measures that will prevent not only the periodic overflows which occur almost every year, sowing the seeds of disease and death throughout this entire lower country, but of measures that will go yet farther, and through a comprehensive, skillfully planned system of drainage will make dry the swamps and marshy places, and reclaim the millions of acres of valuable land that to-day remain

more or less submerged as they were left by the aborigines, giving off continually noxious gases, which in their effects are annually consigning thousands to premature graves, and at the same time placing the health of the whole people upon a lower plane than it would otherwise occupy, diminishing thereby their powers of resisting disease and enabling epidemics, as a consequence, to count their victims in greater numbers.

To promote and make effective such inter-State sanitation as is here feebly indicated, requires, from the organic structure of our system of government, a cordial co-operation of State with State, and of all with the General Government; for, indeed, a work of such magnitude can only be undertaken and carried on to a successful termination by the National Government. It, therefore, is for us through a definite plan of co-operation to first, severally and collectively, gather such facts as may tend to elucidate this all-important subject; then let them be consolidated by the National Board of Health, and (accompanied by a clear, forcible argument) be presented to Congress, urging the enactment of such laws as will authorize the Government to begin the work at the earliest day possible, and go forward uninterruptedly with it to the end. Then will be dispelled, and then only, this deadly malaria which ever hangs like a heavy cloud over the entire Mississippi Valley, acting as a great clog to the energies of its inhabitants, and undermining the constitutions of all.

Thus cursorily have I indicated but one or two of the many subjects that will present themselves in the progress of events, requiring concert of action between the several States here represented; and it is for us upon this occasion to adopt such rules as may be necessary, looking to this end, combining in their structure simplicity with yet sufficient strength and latitude for any emergency.

I now welcome you to a labor which is pregnant with the future weal of hundreds of thousands of our people; and to the visitors in our midst, permit me, in behalf of the people of Tennessee, to extend to each and all a most cordial greeting.

At the conclusion of Dr. Plunket's address, Dr. Mitchell moved that Gen. Cyrus Bussey, of New Orleans, take the chair pending the permanent organization of the COUNCIL.

In acknowledging the compliment, Gen. Bussey briefly recited the action already taken in his own city, and stated that he was in attendance on behalf of the mercantile fraternity of New Orleans to confer with the medical fraternity, in order that they might together concert some action by which future epidemics might be averted or controlled. He assured the Convention that the Auxiliary Sanitary Association of New Orleans, which he had the honor in part to represent, were in full accord with the authorities of that city in instituting such sanitary measures as might be calculated to further the end in view and to allay the fears of the people of the Mississippi Valley as to the breaking-out of another epidemic in New Orleans.

On motion of Dr. Plunket, Dr. J. H. Rauch, of Chicago, was appointed temporary Secretary.

Drs. S. Choppin, of New Orleans, and F. N. Burke, of Helena, Ark., having been appointed a Committee on Credentials, reported as present, the following

LIST OF REPRESENTATIVES:*

R. C. KEDZIE, M. D., President Michigan State Board of Health, Lansing, Mich.

JOHN H. RAUCH, M. D., Member Illinois State Board of Health, Chicago, Ill.

PINCKNEY THOMPSON, M. D., President Kentucky State Board of Health, Henderson, Ky.

R. C. THOMAS, M. D., Member Kentucky State Board of Health, Bowling Green, Ky.

R. W. MITCHELL, M. D., Member National Board of Health, Memphis, Tenn.

J. D. PLUNKET, M. D., President Tennessee State Board of Health, Nashville, Tenn.

WM. M. CLARK, M. D., Secretary Tennessee State Board of Health, Nashville, Tenn.

R. B. MAURY, M. D., Member Tennessee State Board of Health, Memphis, Tenn.

HON. JOHN JOHNSON, Member Tennessee State Board of Health, Memphis Tenn.

G. B. THORNTON, M. D., President Memphis Board of Health, Memphis, Tenn.

S. H. ALLEN, M. D., Secretary Memphis Board of Health, Memphis, Tenn.

F. N. BURKE, M. D., Municipal Board of Health, Helena, Ark.

J. M. TAYLOR, M. D., Member Mississippi State Board of Health, Corinth, Miss.

S. M. BEMISS, M. D., Member National Board of Health, New Orleans, La.

SAMUEL CHOPPIN, M. D., President Louisiana State Board of Health, New Orleans, La.

D. C. HOLLIDAY, M. D., Auxiliary Sanitary Association of New Orleans, New Orleans, La.

GREENSVILLE DOWELL, M. D., Galveston Board of Health, Galveston, Tex.

GEN. CYRUS BUSSEY, Auxiliary Sanitary Association of New Orleans, New Orleans, La.

MR. EDWARD FENNER, Auxiliary Sanitary Association of New Orleans, New Orleans, La.

MAJ. C. G. FISHER, Auxiliary Sanitary Association of New Orleans, New Orleans, La.

The Secretary read letters from Dr. D. W. Hand, President of the Minnesota, Dr. J. T. Reeve, Secretary of the Wisconsin, and Dr. Charles Ambrook, Secretary of the Colorado, State Boards of Health, respectively, indorsing the formation of the Council, and expressing sympathy with its objects and readiness to co-operate therewith.

*At the adjourned meeting of the Council, held in Atlanta May 5, additional representatives were present, whose names and addresses may be found upon pages 18, 20, 22 and 25.

Upon the acceptance of the report of the Committee on Credentials, Dr. Plunket moved the appointment of a committee of five members to devise a plan for the permanent organization of the Council; and the Chair appointed as such committee the following: Drs. Plunket, Rauch, Holliday, Thompson and Kedzie.

Drs. Choppin, Thomas and Maury were also appointed a committee to prepare business for the action of the Council.

Pending the reports of these committees, the meeting adjourned until 9 o'clock A. M., May 1.

THURSDAY, May 1, 9 A. M.—Pursuant to adjournment the meeting was called to order by Gen. Bussey, temporary Chairman, and the following report from the Committee on Permanent Organization was presented by its Chairman, Dr. Plunket:

Your Committee, appointed to prepare and present a constitution for this Convention, beg leave to report the following:

CONSTITUTION
OF THE
Sanitary Council of the Mississippi Valley.

TITLE.

I. This organization shall be called THE SANITARY COUNCIL OF THE MISSISSIPPI VALLEY.

OBJECT.

II. The object of this COUNCIL shall be to promote Inter-State Sanitation, and to prevent the spread of epidemics.

MEMBERS AND FEES.

III. The membership of the SANITARY COUNCIL shall be composed of such delegates from State Boards of Health, and other sanitary organizations, as the majority of the COUNCIL present may, from time to time, elect. The fee shall be ten dollars annually from each organization having representatives in the SANITARY COUNCIL.

OFFICERS.

IV. The officers shall be a President, Vice President and Secretary. All the officers shall be elected annually by ballot, except the Secretary, who shall be elected for a term of three years.

DUTIES OF OFFICERS.

V. The President, and in his absence the Vice President, shall perform all the duties of the presiding officer, and shall call a special meeting of the COUNCIL at the request of five members representing five different States, one being from each State.

VI. The Secretary shall keep the records, conduct the correspondence of the COUNCIL and perform such other duties as the Executive Committee

may direct. In addition, he shall also be required to perform the duties of Treasurer, and shall at each annual meeting render an itemized account of all moneys received and expended.

EXECUTIVE COMMITTEE.

VII. The Executive Committee shall consist of the President, Vice President and Secretary, whose duties shall be to carry into effect the directions of the COUNCIL, and to act for it during the intervals of its sessions, and to decide upon the place of each annual meeting.

ANNUAL MEETING.

VIII. The annual meeting shall be held on the third Wednesday in April of each year.

QUORUM.

IX. The delegates from any five States shall constitute a quorum for the transaction of business.

ORDER OF BUSINESS.

X. The order of business shall be as follows:

1. Roll call.
2. Reading and correction of minutes of preceding meeting.
3. Election of new members.
4. Report of Executive Committee.
5. Reports of special committees.
6. Report of Secretary and Treasurer.
7. New business.
8. Election of officers.

ALTERATION OF CONSTITUTION.

XI. No alteration in the Constitution of this COUNCIL shall be made, except at the annual meeting, and then only by a vote of two-thirds of the members present.

PROCEEDINGS
OF THE
Sanitary Council of the Mississippi Valley.

THE report of the committee having been accepted, on motion of Dr. Mitchell, the Constitution, after discussion, was adopted, and the meeting resolved itself into THE SANITARY COUNCIL OF THE MISSISSIPPI VALLEY, and proceeded to the election of officers, which resulted as follows:

President—J. D. Plunket, M. D., of Tennessee.

Vice President—Pinckney Thompson, M. D., of Kentucky.

Secretary and Treasurer—John H. Rauch, M. D., of Illinois.

Thanking the members for the honor conferred upon him, the President called for the reports of committees, under which call Dr. Choppin, of the Committee appointed to prepare business for the action of the COUNCIL, prefaced the report with a statement of the measures being enforced by the Louisiana State Board of Health to prevent the introduction and spread of yellow fever, and of which the following is the substance:

In accordance with a proclamation issued by Gov. Nicholls on the 10th of April, which went into effect April 30, a quarantine station has been established at a point seventy miles below the city. Vessels coming from ports where yellow fever usually prevails—that is from all ports on the Gulf lying to the south of Texas and all West India, Bahama and Bay Islands—are subject to a quarantine of twenty days. The regulation includes the vessel itself, the cargo, crew, officers and passengers. When a vessel has arrived from any port declared to be infected, she is towed up from the mouth of the river to the Quarantine Station, and discharges her cargo at the Government Wharf. The cargo is then placed in the Government Warehouse, where it is fumigated and disinfected. The vessel, after discharging her cargo, will also be fumigated and disinfected, and then be allowed to proceed to sea without touching at the port of New Orleans at all. When clear from the Quarantine Station, the vessel will be allowed the privilege of taking on her outward cargo, under the following regulations: The outward cargo will be

placed upon a barge at the city and towed down to a point near the Quarantine Station, to be hereafter designated. The barge will there be anchored in the middle of the river, and all persons on board of her removed. Then, after being thoroughly disinfected, the vessel will be allowed to come alongside and take on her cargo with her own crew, and depart. The barge will then be disinfected before being allowed to return to the city.

In the event of any cases of fever breaking out in the city from germs hibernating from the last epidemic, each case will be kept under strict surveillance, and ingress and egress from the house where such case occurs will be prevented by a cordon of sanitary police, so as to prevent the spread of the disease.

Dr. Choppin added that the City Council and the State Board of Health, assisted by the Auxiliary Sanitary Committee, are doing all in their power to place the city in a perfect sanitary condition. The State Board of Health will take pleasure in communicating to other State Boards any information which may be desired.

At the conclusion of Dr. Choppin's remarks, Gen. Bussey claimed the attention of the meeting for a few minutes, and spoke as follows :

MR. PRESIDENT: Before we act on the report of the Committee, I desire to make a statement. I am aware that the people throughout the country where yellow fever has existed look to New Orleans as the point of greatest danger, and, in view of past experience, not without cause. Last year, the sanitary condition of New Orleans was as bad as it is possible to imagine; the city authorities believed in the measures adopted by the Board of Health, viz., the use of carbolic acid, etc., and not having revenues sufficient for the work necessary, allowed the city to become unusually filthy. Garbage, which should have been removed beyond the reach of the inhabitants, was dumped on the streets to breed disease. The season was the warmest known for many years, with greater humidity in the atmosphere than usual, producing just the conditions necessary for the spread of the poison. Hence it was that, when yellow fever broke out, it soon spread, and rendered the measures adopted by the Board of Health unavailing.

I want to assure you, gentlemen, and the organizations you represent, that New Orleans is determined to make amends as far as possible, and we hope to gain your confidence in our city as a place where people can live, *every month in the year*, without fear of infectious diseases. The Board of Health has adopted measures to this end, including a rigid quarantine and the strictest sanitary measures. The city authorities are working in full accord, but have not the means to perform the work, except in part. To meet the emergency, the merchants and other citizens of New Orleans have organized a sanitary association, under the laws of the State, to co-operate with the Board of Health and the city authorities in performing the duty. We have called upon the people for voluntary subscriptions, which have been freely given, our banks and insurance companies subscribing \$500 to \$1,000 each, while our merchants have given from \$50 to \$500 each, and those less able their small contributions. Fire companies and owners of tugboats and engines have tendered the free use of their engines to aid in flushing the gutters. Our association is purchasing covered carts to supply a deficiency for removing garbage, constructing garbage and nuisance boats, laying pipe on the front of the city with

which to flush the gutters, and building flood-gates through which the canals in the rear of the city may be kept supplied with pure water. We have caused to be filled up with river sand the cemeteries, and those objectionable closed against future burials, and are also purchasing disinfectants for free distribution.

We have invited, and are receiving, the active co-operation of all the benevolent, charitable and screwmen's associations, numbering many thousand persons, in enforcing our recommendations. We have organized local sanitary committees in every ward, whose duty it is to see to the thorough cleansing of their immediate localities. We have addressed an appeal to every church, of every denomination or creed, white or colored, to be read to their congregations, in which we ask every householder in New Orleans to see to the perfect cleanliness of his own premises, and to report every nuisance which may exist to the Association. We have appointed many inspectors and volunteer policemen, who have been commissioned by the Mayor, to aid in the enforcement of city sanitary ordinances. We expect to raise and disburse in this work \$100,000.

The enforcement of rigid quarantine regulations against a large part of the trade of New Orleans imposes a heavy loss on the people engaged in commerce in our city. The fruit trade alone was estimated at \$100,000 for last week. In view of what we are doing, I hope inland towns and cities will not quarantine against us until it is absolutely necessary for their own protection, as we are doing all that can be done to preserve the health of the city. May I not ask that all the towns in the fever district adopt measures similar to those I have shown you we have inaugurated. I know, from experience, that country towns are liable to become unfit to live in from neglect on the part of those in authority. I remember an instance during the war, when I assumed command at Fort Smith. I found four thousand soldiers camped near the town, with the dead carcasses of twenty-five or thirty animals within easy smelling distance, and the town in a most filthy condition. Much can be done by united effort here in this city and elsewhere remove the conditions favorable for the reception and spread of yellow fever.

I am aware that New Orleans has been suspected of not always telling the truth about the existence of yellow fever. I want to say here, whatever may have been the facts in the past, there shall be no deception in the future. The Board of Health will make truthful reports, and the Association I represent authorize me to assure you and the public that truthful reports shall be made at all times by that Association. The question is one involving the lives of the people, and it shall not be said that we suppress the truth in order to save our trade at the risk of spreading disease to neighboring cities. I have lived in New Orleans thirteen years, and am not acclimated. I have been in New Orleans several times when, there have been cases of yellow fever in the city, but confined to a limited district. The disease not being epidemic, I felt that there was no danger of taking it. Dr. Choppin has stated that, should sporadic cases appear during the summer, they will be isolated and kept excluded from contact with people who might spread the disease. It is hoped that we may pass through the summer without a recurrence of the terrible scenes which are fresh in the minds of all of you. We can do much to prevent them.

The Secretary, Dr. Rauch, supplemented the remarks of Dr. Choppin and Gen. Bussey with a résumé of his observations during a recent visit to

New Orleans in the interests of the Illinois State Board of Health. He had found a most gratifying activity in sanitary matters in that city, which promised well for the future. The State Board, although crippled for resources, is taking every possible precaution against the introduction of yellow fever, by a rigorous and efficient quarantine; while the Auxiliary Sanitary Association, composed of some of the most prominent citizens and business men of New Orleans, is directing every energy to municipal sanitation, and vigorously aiding the State Board in its work. The results of their conjoined labors are already seen in the improved sanitary condition of the city and in the growing confidence of all classes in their ability to prevent a repetition of the terrible experiences of 1878.

The report of the Committee was then, upon motion of Dr. Kedzie, received, and the various propositions which it embraced were taken up and discussed *seriatim*, by Drs. Holliday, Thompson, Choppin, Maury, Bemiss, Mitchell, Rauch, Thornton and Gen. Bussey. As amended, after this discussion, the resolutions and recommendations adopted by the COUNCIL are as follows :

I.

This COUNCIL approves the action of the State Board of Health of Louisiana and the Auxiliary Sanitary Association of New Orleans to prevent the introduction and spread of yellow fever, and the assurance given by that Board to furnish immediate information to all Boards of Health represented in this COUNCIL.

II.

The Louisiana State Board of Health obligates itself to furnish information to all the Boards represented in this COUNCIL. Whenever a case of yellow fever is reported to the authorities at New Orleans, the same will be reported by telegram to all the Boards of Health and sanitary organizations represented in the MISSISSIPPI VALLEY SANITARY COUNCIL.

III.

It recommends that all the cities, towns and villages along the Mississippi River and along the lines of the different railroads emerging from New Orleans, be at once placed in the best possible sanitary condition.

IV.

It is urged upon every inland town to report at once to the nearest Board of Health the occurrence of any and every case of yellow fever which may appear within or near its limits, and the isolation and disinfection of every such case is strongly urged.

V.

It recommends to the National Board of Health the establishment of quarantines at the South Atlantic and Gulf ports where they do not now exist.

VI.

This COUNCIL will furnish information to the various towns and cities in the Mississippi Valley when inland quarantine should, in its opinion, be enforced.

On motion of Dr. Rauch, the following propositions of those submitted by this Committee, were referred to a special committee, composed of Drs. Maury, Choppin, Taylor, Kedzie, White and Thomas, with instructions to report thereon, at the adjourned meeting at Atlanta :

1. That measures be adopted in New Orleans for preventing the infection of river boats by contact with vessels from foreign ports.

2. That this COUNCIL make appeal to the Louisiana State Board to prevent barges coming in contact with vessels at quarantine stations from carrying cargoes to up-river ports, otherwise cargoes of sugar will be carried in sealed barges to St. Louis.

The Committee was also instructed to report upon such precautionary measures as may be deemed advisable with reference to steamboat and railroad traffic.

The following resolutions were then offered and adopted :

Resolved, That the SANITARY COUNCIL OF THE MISSISSIPPI VALLEY heartily indorses the bill now pending before Congress "to increase the efficiency of the National Board of Health, and to prevent the introduction into, or spread within, the United States of contagious and infectious diseases," and would respectfully recommend its speedy passage by Congress, so as to clothe the Board with executive, as well as advisory powers.

Resolved, That this COUNCIL is in hearty sympathy with the National Board of Health in its object of securing the restraint of pestilential epidemics in the whole country, and pledges itself to a hearty co-operation with the National Board of Health in this noble work.

Resolved, That a copy of these resolutions be sent to the State delegations in Congress, of each of the States represented in this SANITARY COUNCIL, respectfully requesting their assistance in securing legislation which shall protect our people from foreign pestilence and domestic danger.

Dr. Kedzie—premising that he did not wish to be Chairman of the Committee—offered the following resolution, which, with the amendment of Maj. Fisher, was adopted :

Resolved, That a committee of three be appointed by the Chair to prepare an address to the cities and towns of the Mississippi Valley, setting forth the necessity of immediate sanitation in every city and municipality of the valley, and the means and methods of such sanitary reforms.

Amendment by C. G. Fisher: That all such cities, towns and villages in the Mississippi Valley be urgently requested to immediately appoint and authorize some board or person in their respective communities to place themselves in correspondence with their respective State Boards of Health, which person or board shall make prompt and truthful reports of all cases of yellow fever, or any other infectious disease, occurring in their locality; and that no quarantine be established without consultation with or by advice from the State Boards of Health, and that Citizens' Sanitary Associations be organized in all such towns.

Drs. Holliday, Maury and Kedzie were appointed said committee.*

Dr. Holliday offered the following resolutions, which were adopted:

Resolved, That the Secretary of this Council communicate at once with the various Boards of Health of such States as are not here represented, to know what action they will take with regard to their membership in said COUNCIL.

Resolved, That the Executive Committee of this SANITARY COUNCIL be directed at once to publish, in pamphlet form, a full report of the transactions, and a list of those organizations having membership in said COUNCIL, for immediate distribution to all members and to those who may consider themselves interested in this important measure.

On motion of Dr. Kedzie, the Auxiliary Sanitary Association of New Orleans and the Helena and Memphis Boards of Health were admitted to membership.

At 1 o'clock, the COUNCIL adjourned for dinner, and before re-assembling, visited the quarantine station on President's Island. On returning, the COUNCIL assembled in the parlor of the Peabody Hotel, when Dr. Clark, of Nashville, offered the following resolution, which was adopted:

Resolved, That a vote of thanks be extended Messrs. Brown & Jones, for their courtesy in extending the use of their steam-tug to take the members of this COUNCIL to the quarantine station.

Resolved, That the Executive Committee be instructed to prepare and carry into effect a plan of Inter-State Sanitation, and every organization having representation in this COUNCIL is hereby pledged to carry out the same.

Dr. Kedzie moved that the thanks of the COUNCIL be extended to the Howard Association, for the use of their rooms and the many courtesies shown them. Adopted.

* The address of the Committee will be found appended to this record of proceedings.

Dr. Kedzie moved that when this COUNCIL adjourn it shall be to meet in Atlanta, Ga., on the 5th of May. Adopted.

Dr. Thompson moved that the thanks of this COUNCIL be tendered the press of Memphis, for its kindness in reporting so accurately the proceedings of this meeting. Adopted.

On motion, the COUNCIL adjourned, in pursuance with Dr. Kedzie's resolution.

ATLANTA, Monday, May 5, 1879.—The COUNCIL met, pursuant to adjournment from Memphis, the members, during the forenoon, having participated, by invitation, in the discussion of the subject of maritime quarantine, with the National Board of Health, in the Senate Chamber of the Capitol.

At 8 o'clock P. M., the COUNCIL assembled in the Kimball House, the President, Dr. Plunket, in the chair. Present: Drs. Kedzie, Rauch, Thompson, Dowell, Mitchell, Bemiss and Mr. Fenner.

The reading of the minutes of the previous meeting was, on motion, dispensed with, and, instead thereof, the President, for the information of those present, who embraced many members of the National Board of Health and representatives of various sanitary organizations, briefly recited the proceedings of that meeting, and explained the object of the formation of the COUNCIL.

On motion, the following representatives were elected to membership in the COUNCIL:

E. L. GRIFFIN, M. D., President Wisconsin State Board of Health, Fond du Lac, Wis.

J. T. REEVE, M. D., Secretary Wisconsin State Board of Health, Appleton, Wis.

OLON MARKS, M. D., Member Wisconsin State Board of Health, Milwaukee, Wis.

G. B. WALKER, M. D., President Evansville Board of Health, Evansville, Ind.

H. G. JONES, M. D., Health Officer of Evansville and Secretary of Board of Health, Evansville, Ind.

O. W. WIGHT, M. D., Health Officer of Milwaukee, Milwaukee, Wis.

E. M. WIGHT, M. D., Member Tennessee State Board of Health, Chattanooga, Tenn.

GEORGE HOMAN, M. D., Chief Sanitary Officer of Health Department of St. Louis, St. Louis, Mo.

C. B. WHITE, Sanitary Director Auxiliary Sanitary Association, New Orleans, La

Upon the call for reports from special committees, the Secretary stated that the Committee appointed upon certain propositions relative to Inland Quarantine had not reported; whereupon the President asked for individual

views upon this subject, inviting all those present and interested to participate in the discussion. Drs. White, Homan, Kedzie, Plunket, Rauch, Bemiss, Mitchell, E. M. Wight, Jones and Thompson (of the COUNCIL), and James L. Cabell, John S. Billings, H. A. Johnson, Stephen Smith and Thomas J. Turner (of the National Board of Health) responded to the invitation.

In order to facilitate business, Dr. White moved that a committee be appointed to confer with the National Board of Health, to formulate propositions for discussion on Inland Quarantine.

The Chair appointed as such Committee Drs. White, Kedzie, E. M. Wight, Rauch and Homan, who reported the following

MEMORANDA :

I. River transportation—means of securing its good sanitary condition. (a) River steamers—how to secure their freedom from infection at New Orleans. How to deal with them at various points on the Mississippi and its tributaries. (b) Barges and towboats—same queries as for steamers. Can an infected barge be satisfactorily disinfected? and if so, how?

II. Railroads—(a) Sanitary condition of depots and stations. (b) Quarantine stations on railroads, their position and organization; specify for passenger trains, sleeping-cars, car construction, freight-trains, and construction-trains. (c) Mails. (d) Expressage.

III. System of notification of occurrence of first cases of a dangerous disease especially yellow fever. When is it proper to say that yellow fever is epidemic in a town?

IV. Miscellaneous—Has any infection ever been traced to sugar? coffee?

On motion, the foregoing was adopted for discussion at the meeting of the National Board to be held the following day.

Dr. Kedzie, from the Committee on address to Mississippi Valley cities, towns and villages on the urgent need of sanitary work, reported progress.

An informal discussion of much practical interest then ensued, in which the differential diagnosis of yellow fever, malarial hemorrhagic fever, etc.; the complications and difficulties in the way of efficient quarantine and other preventive measures, owing to reluctance, not only of mercantile, but often of professional men to admit the existence of epidemic disease, and kindred points, were considered.

At the conclusion of this discussion, on motion, the COUNCIL adjourned, subject to the call of the President.

TUESDAY, May 6, 9 P. M.—Upon the call of the President, the COUNCIL met at its rooms in the Kimball House. Present: Drs. Kedzie, Thompson, Rauch, Dowell, White, Mitchell, Bemiss, Griffin, Reeve, Marks, Walker, Jones, O. W. Wight, E. M. Wight, Homan and Mr. Fenner.

The following additional representatives were admitted to membership :

E. P. SALE, M. D., Member Mississippi State Board of Health, Aberdeen, Miss.
O. S. IGLEHART, M. D., President Vicksburg Board of Health, Vicksburg, Miss.
D. H. DUNGAN, M. D., Member Little Rock Board of Health, Little Rock, Ark.
J. A. DIBRELL, JR., M. D., Member Little Rock Board of Health, Little Rock, Ark.

EDWARD CROSS, M. D., Member Little Rock Board of Health, Little Rock, Ark.

There were also present many members of the medical profession, and of the National Board of Health.

On motion, the discussion of the subject of Inland Quarantine, which had occupied the morning session of the National Board, and in which the members of the COUNCIL had also participated, was then formally taken up by the COUNCIL. The Secretary submitted the following series of propositions for discussion and action :

SANITARY INSPECTION OF STEAMBOATS CARRYING PASSENGERS AND FREIGHT FROM THE GULF PORTS INTO THE INTERIOR.

Proposition I. Every captain or commanding officer shall keep in a book or permanent record the sanitary history of the steamboat from the 1st of April to the 1st of December inclusive. Such captain or commanding officer, before leaving a sea-port city or town, shall obtain a certificate from a medical inspector, which certificate shall be entered upon and form a part of said record, certifying that he has personally examined the steamboat, and that all the rules and regulations adopted by this COUNCIL, relating to the cleansing and disinfection while at the docks and wharves of a city or town, have been complied with. Said certificate shall also state that the cargo of freight, of whatever description, is in good sanitary condition, and may be safely transported to its point of destination.

Discussed by Drs. White, Jones, Dowell, Mitchell, Thompson, Iglehart, Homan, Dungan and Rauch.

Adopted.

Proposition II. The captain or commanding officer shall daily enter upon this record all facts relating to the health of the passengers and crew, and the amount and kind of sanitary cleansing during the passage.

The following amendment to this proposition was offered :

That the captain or commanding officer be compelled to verify by affidavit at the time of inspection, the correctness of the daily record.

The motion to amend was carried, and the proposition, as amended, was adopted.

Proposition III. The re-inspection of said boat shall be required only at the point of destination (except as hereinafter provided), at which point the medical inspector shall examine, before she discharges her cargo, the sanitary record of the boat and the boat itself. If such record has been neglected and the boat is in a bad sanitary condition, the medical inspector shall require proper sanitary cleansing before the cargo is discharged or a new cargo is put on board. On the return passage, the same rules apply.

Discussed by Drs. Thompson, Plunket, Mitchell, Homan, Iglehart, White and Rauch.

Adopted.

Proposition IV. All boats navigating the Mississippi River shall undergo inspection and re-inspection, in the same manner as above provided, upon arrival at New Orleans, Vicksburg, Memphis, Cairo and the point of destination.

Discussed by Drs. Homan, Thompson, Iglehart, Dibrell and Rauch.

Adopted.

Proposition V.—Whenever yellow fever or cholera prevails at any of the Gulf ports, the medical inspector shall certify on the record the precautions that have been taken, and the danger to be apprehended from cargo, passengers and crew. The re-inspection must be made at least one mile from a town, at a point suitable for the care of the sick, detention of the well, and the disinfection and cleansing of cargo and boat.

Discussed by Drs. White, Plunket, Jones, Thompson, Homan, Iglehart, Mitchell and Rauch.

Adopted.

Proposition VI.—The foregoing rules and regulations shall also apply to tugs, tows and barges.

Adopted.

Drs. Charles F. Folsom, of Massachusetts; Stephen Smith and S. O. VanderPoel, of New York; H. M. Nash, of Virginia; Thomas J. Turner, of the U. S. Navy; S. E. Chaillé, of Louisiana, and other distinguished sanitarians, not members of the COUNCIL, participated in the discussion upon these propositions, and approved of their practical bearing and character.

On motion, a committee was appointed to prepare a series of similar propositions with reference to railroad sanitation and quarantine. Drs. White, Sale, E. M. Wight, Kedzie and Rauch were appointed by the Chair with instructions to report at the next meeting.

The Secretary was also instructed to report the propositions as above adopted to the National Board of Health at its next meeting.

On motion, the COUNCIL adjourned to Wednesday evening.

WEDNESDAY, May 7, 8:30 P. M.—The COUNCIL met pursuant to adjournment. Dr. E. L. Griffin, of Wisconsin, presiding, in the absence of the President and Vice President.

Present: Drs. Kedzie, Rauch, Dowell, White, Mitchell, Bemiss, Griffin, Reeve, Marks, Walker, Jones, O. W. Wight, E. M. Wight, Homan, Sale, Iglehart, Dungan, Dibrell, Cross and Mr. Fenner.

Drs. F. R. Michel, of Montgomery, Ala., member of the Alabama State Board of Health, and A. B. Cook, of Louisville, Ky., member of the Louisville Board of Health, were admitted to membership.

Under the call for reports, the Secretary stated that he had, in obedience to his instructions, submitted to the National Board of Health, at its session that day, the series of propositions adopted by the SANITARY COUNCIL with reference to the subject of river transportation. Although no formal action had been taken by the National Board, the propositions were discussed at length, Dr. VanderPoel, of New York, opening the debate with the remark that the propositions met his hearty concurrence, and were calculated to produce the desired results; they would establish the sanitary condition of a vessel at the point of departure, and maintain a system of inspection, as she passed up the river. Drs. Gihon, U. S. N., and Turner, Bell, Thompson, White, Blaine and others of the Board, discussed various phases of the subject, and the speaker answered such questions and furnished such information as was called for in further elucidation of the matter. He also stated that the National Board adjourned its morning session to meet in conjunction with the SANITARY COUNCIL at the present meeting, and that that body was now largely represented, and would share in the deliberations of the COUNCIL.

Dr. Kedzie, from the Committee to draft propositions concerning Railroad Sanitation and Quarantine, submitted the following on behalf of said Committee:

SANITARY SUPERVISION OF RAILROADS, AND OF TRAVEL AND TRAFFIC BY RAILROADS.

Proposition I.—Concerning the Sanitary Care of Depots, Stations, Round-houses, Car-shops, Grounds, etc.: At all seasons of the year, the depots and surroundings shall be kept in a good sanitary condition, the grounds well drained and free from stagnant water and decomposing organic matter; the water-closets and privies

shall be daily inspected by the local railroad agent or official, who shall cause the floors, seats and urinals to be kept clean and free from all offensive odor; the vaults of privies shall be emptied often enough to prevent any large accumulation of excremental matter, and shall be disinfected every week by pouring into the vault a saturated solution of the sulphates or chlorides of iron or zinc, in sufficient quantity to remove all offensive odors.

Discussed by Drs. White, E. M. Wight, Mitchell, Kedzie, Dibrell, Cross and Rauch of the COUNCIL; and Drs. Billings and Johnson of the National Board.

Adopted.

Proposition II.—Concerning Railroad Quarantine: 1. Whenever a railroad train departs from an infected station, no person with fever shall be allowed to take passage on such train. The baggage from such infected station shall be thoroughly disinfected before leaving such railroad station. At a point not less than fifty (50), nor more than seventy-five (75) miles from the point of departure from an infected place, there shall be an entire transfer of passengers and baggage to another train of cars, which train shall never enter an infected district. This transfer shall be made under the supervision of a medical officer. No person with fever shall be allowed to proceed on this train, but shall return to the point of departure, or be treated in hospital at the place of transfer.

2. No sleeping-car shall be allowed to remain in an infected town, nor shall any sleeping-car approach nearer an infected place than this point of transfer. Any passenger-car leaving an infected place shall be thoroughly ventilated during its passage to the place of transfer, by having not less than one-half of the windows of the cars open during such passage.

3. The upholstered seats of passenger and sleeping-cars, and the mattresses and pillows of sleeping-cars shall be thoroughly whipped or beaten (in the open air so far as practicable), and brushed free from all dust, and thoroughly aired and sunned at the end of each trip; the blankets and curtains of all sleeping-cars shall also be beaten and aired in the same way. In case of infection of a passenger-car, or of a sleeping-car, all the upholstery, cushions, curtains, bedding, mattresses, etc., shall be thoroughly disinfected, under the supervision of a medical officer, before being again used.

4. The cars which carry freight without breaking bulk, may pass without transfer, if the freight cars are ventilated in such way that a constant current of air passes through the whole length of the car during transit. Way freight shall be transferred at a point not exceeding fifty (50) miles from the point of departure, and the cars from which such freight has been transferred shall not proceed further on the road, but shall be returned to the point of departure. During the existence of an epidemic of yellow fever, the freight-cars, after unloading, shall be thoroughly cleansed by scrubbing and sprinkling with carbolic acid, or fumigated and disinfected and then painted.

5. All railroad-cars should, at all times, be well ventilated; the freight-cars when loaded, should have barred doors to permit the free entrance of air at all times, whether moving on the track, or placed upon the sidings; and passenger

and sleeping-cars should be provided with automatic ventilators, so as to secure a rapid change of air in the cars at all times.

Discussed by Drs. White, Iglehart, E. M. Wight, Mitchell, Homan, Kedzie, Dibrell and Rauch, of the COUNCIL; Drs. Billings, Smith, Turner and Johnson, of the National Board; Gihon, U. S. N.; Howard, of the Maryland State Board of Health; Folsom, of the Massachusetts State Board of Health; Cleeman, of the Philadelphia Board of Health; Sloan, of Kansas City; Hope, of Fernandina, Fla.; and Mayor Cobb, of Pensacola, Fla.

Adopted.

Proposition III.—Concerning Mails and Mail-matter by Rail: Mail-matter and mail-bags shall be heated to a temperature of 250 degrees Fahrenheit, or be otherwise disinfected before they are sent from infected places by railway trains.

Discussed by Drs. Dowell, Reeve, Dibrell, Dungan and Rauch, of the COUNCIL, and Billings and Turner, of the National Board.

Adopted.

Proposition IV.—Concerning Notification of Yellow Fever: Whenever any case of yellow fever, or sickness suspected to be yellow fever, shall be found in New Orleans, or in any of the Gulf ports, the President of the State Board of Health of Louisiana, or the President of the Board of Health of such Gulf port, shall at once notify all the members of this SANITARY COUNCIL by letter, giving the date and localities of such sickness. If the disease becomes epidemic, or spreads to such a degree as threatens to become epidemic, full information on all these points shall be given to the members of this Council by the State Board of Health of Louisiana, or President of the Board of Health of any Gulf port.

Discussed by Drs. Cross, Dowell, Thompson, White, Mitchell, Sale, Iglehart, Homan, Dungan and Rauch, of the COUNCIL, and Johnson and Smith, of the National Board.

Adopted.

During the discussion, the Vice President, Dr. Pinckney Thompson, assumed the chair, and at its close, the propositions were adopted as a whole.

The Secretary then read the following communication :

NATIONAL BOARD OF HEALTH, }
ATLANTA, Ga., May 7, 1879. }

Ordered, That the Secretary be directed to inform the SANITARY COUNCIL OF THE MISSISSIPPI VALLEY that the National Board of Health will probably adjourn its Atlanta session to-morrow at 10 A. M.; and that if they have any special business to communicate, it should be brought before the Board by 9 A. M. to-morrow.

A true copy of the order.

THOMAS J. TURNER,
Secretary National Board of Health.

On motion, the Secretary of the COUNCIL was instructed to advise the National Board of the adoption of the propositions above set forth; to call the attention of the Board to the recommendation of the COUNCIL concerning the establishment of quarantine at South Atlantic and Gulf ports where such does not now exist; and to convey to the Board an expression of the desire on the part of this COUNCIL for the fullest co-operation in the measures, aims and objects common to both organizations.

Dr. O. W. Wight offered the following resolutions:

Resolved, That the Secretary be and hereby is instructed to communicate to the National Board of Health and to all local boards of health in the Mississippi Valley a copy of the regulations adopted by this association, with the request that the same be enforced so far as practicable and as existing laws will permit, to the end that uniformity of action may be secured.

Resolved, That the members of this association hereby pledge themselves to use every effort, especially by petitions to Congress and State Legislatures, to secure necessary enactments when existing laws are not sufficient to enable health boards to carry out the provisions recommended.

Adopted.

Discussion of the outbreak of yellow fever upon the U. S. S. *Plymouth* failing to elicit definite information concerning the same, it was ordered that a communication be addressed to the Secretary of the Navy, by the COUNCIL, asking for such authentic details concerning that vessel as are in possession of the Department.

D. W. Hand, M. D. (St. Paul, Minn.), President, and H. S. Hewitt, M. D. (Red Wing, Minn.), Secretary, Minnesota State Board of Health; Oscar DeWolf, M. D., Commissioner of Health, Health Department, Chicago, Ill.; and Thos. C. Minor, M. D., Health Officer, Health Department, Cincinnati, O., were admitted to membership in the COUNCIL.

On motion, a vote of thanks was tendered to the Atlanta *Constitution* for its full and accurate reports of the meetings.

Adjourned *sine die*.

ADDRESS

OF THE

Committee on General Sanitation.

AT a meeting of the SANITARY COUNCIL OF THE MISSISSIPPI VALLEY held in Memphis, Tenn., May 1, 1879, Dr. R. C. Kedzie, of Michigan, offered the following resolution, which, with the amendment of C. G. Fisher, of New Orleans, was unanimously adopted :

Resolved, That a committee of three be appointed by the Chair to prepare an address to the cities, towns and municipalities of the Mississippi Valley, setting forth the necessity of immediate sanitation in every city, town and municipality of the Valley, and the means and methods of such sanitary reforms.

Amendment by C. G. Fisher: That all such cities, towns and municipalities in the Mississippi Valley be urgently requested to immediately appoint and authorize some board or person in their respective communities to place themselves in correspondence with their respective State Boards of Health, which Board or person shall make prompt and truthful reports of all cases of yellow fever or any other infectious disease occurring in their locality, and that no quarantine be established without consultation with or by advice from the State Boards of Health; and that the organization of Citizens' Sanitary Associations be recommended in all such communities.

The committee appointed was : Dr. D. C. Holliday, of New Orleans; Dr. R. B. Maury, of Memphis, and Dr. R. C. Kedzie, of Michigan.

The above Committee respectfully submit the following as their address to the cities, towns, villages and municipalities of the Mississippi Valley :

GENERAL SANITATION.

DRAINAGE.—A thoroughly-drained soil is all important. This should be secured where practicable, by a complete system of sewers or underground drains. If this is not practicable, superficial or surface drains should be properly located, and frequently examined, so as to insure cleanliness and effectiveness.

It is of the first importance that dwelling-houses should be built on dry ground so elevated that there shall be no possibility of an accumulation of stagnant water under the floors at any time.

Constant inspection of houses, cellars, yards and outbuildings is imperative, so as to prevent the accumulation of filth, garbage or masses of decomposing organic matter so prejudicial to health. It is equally necessary that some means be devised for the disposal of the same, so as to render it harmless.

WATER-CLOSETS AND PRIVIES.—*Foul odors are Nature's signal of danger.* Water-closets should be properly constructed, kept free from odor and always plentifully supplied with water. The waste-pipes should be wholly disconnected from all other pipes and provided with independent ventilation. They should be so located as to avoid all possibility of polluting the air of any other part of the house.

Where privies are used, they should be built *above ground with water-tight vaults*, kept always free from foul smell by the liberal use of *dry earth* sifted upon the contents or by the use of a solution of copperas. They should be emptied at least twice a year or oftener if the contents accumulate to more than one-third the capacity of the vault. The walls and ceilings should be thoroughly whitewashed.

Instead of ordinary privies, the *pail system* in general use in many of the manufacturing towns of England is recommended as being found to combine economy, simplicity of construction, easy management, with great facility for removing contents without odor or inconvenience.

Privies should be so placed as to prevent their exhalations from contaminating the air of houses or polluting the sources of water supply from wells or cisterns.

WATER SUPPLY.—"Water, next to air, is the chief necessary of life." We may even place it before food, because all food is largely composed of it; and it is required, too, for personal cleanliness, and for the purification of our houses and their surroundings.

Running streams and springs, which are the best sources of water supply, should be frequently examined, in order to detect otherwise unsuspected causes of pollution.

Cisterns should be constructed of suitable material, carefully built and covered, and so placed that no foul air can pass through or over the water they contain. The overflow pipes from cisterns should be free from connection with any other pipes. Roofs and gutters supplying cisterns must be frequently inspected, and some simple contrivance should be adopted to insure their careful cleansing, before the water is allowed to run into the cistern. Cistern-water ought to be frequently examined and kept free from color, odor, or other indications of impurity.

Wells are the most dangerous sources of water supply, for few wells are safe from surface pollution. Wells should, therefore, be properly located, to avoid all possible risk of contamination from their surroundings, carefully built with elevated curbs and covered tops. The water they contain should be examined at short intervals.

A simple method of examination is by dissolving a lump of loaf sugar in a quantity of the suspected water in a clean bottle, which should have a close-fitting glass stopper. Set the bottle in the window of a room where the sunlight will fall on it. If the water remains bright and limpid after a week's exposure, it may be pronounced fit for use. But if it becomes turbid during the week, it contains enough impurity to be unhealthy. Such water should not be used for drinking purposes until it has been boiled and filtered; after which it should be aerated by any simple process, such as pouring several times from one vessel into another in

the open air. The addition of a solution of permanganate of potassa will also serve, in most cases, to sufficiently purify water for drinking purposes. Eight grains of the permanganate to one ounce of distilled or boiled water will make the solution. Add one drop of this to half a pint of the suspected water; if the red tint disappears in half an hour, add another drop. For every drop that loses its color in the half pint, there will be from one-half to two grains of organic impurity in one gallon of the water. If such water must be used, drop in the permanganate until the red tint remains; the solution in this proportion is not injurious, nor does it taste unpleasantly.

DWELLINGS.—The prime conditions of health in a house depend upon *cleanliness, pure air and unpolluted water*; the prompt and thorough removal of all refuse; and the perfect exclusion of all foul matters arising outside the house.

Good ventilation is absolutely necessary. Rooms should be frequently aired, and a *daily* visit from Dr. Sunshine encouraged. Overcrowding is a fruitful source of air-pollution in dwellings.

Zealous attention should be paid to cellars, pantries and passages. Mold, dampness and foul smells are never to be neglected. The sun's rays, free ventilation and a lavish use of whitewash are excellent scavengers.

The floors of dwellings should be frequently washed. Choose for this purpose a dry day; doors and windows to be left open during and after the operation until thoroughly dry. The floors of dwellings should always be raised from three to four feet above ground, so as to insure perfect ventilation beneath, and the site should be higher than the surroundings, so as at all times to prevent dampness or presence of stagnant water.

DISINFECTANTS AND DEODORANTS.—More than half of these agents are valueless in preventing disease, and dangerous as being productive of false security.

Heat and *pure air* are the best of all disinfectants. Where other agents are necessary, the following list will be found useful:

Copperas can be used almost anywhere, cheap and efficient. Especially useful in privies, etc. Ten pounds in a pailful of water; a teacupful in bed-pans, chambers, etc., after being used. A quart a day in privies, urinals, etc., for ordinary purposes. In dangerous diseases, add from a pint to a quart to each discharge. The contents of a privy six feet in diameter and twelve feet deep, will require twenty pounds of copperas to disinfect it.

Quicklime and *gypsum* or *land-plaster*, are good absorbents, and may be used advantageously in damp places, cellars, gutters, etc. They should not, however, be used in drains, catch-basins, sewers, soil-pipes, etc.; nor where they are liable to be washed into such places, lest they, by decomposing soap-water, form lime-soap and obstruct the passages.

Charcoal is one of the best deodorants, absorbing large volumes of gases. May be used in powder, mixed with lime or gypsum, and sprinkled freely in malodorous localities. Suspended in a basket, in cisterns, meat-safes, dairies, etc., it tends to keep the contents from absorbing foul odors. Charcoal should be frequently reheated to drive off the absorbed gases and renew its efficiency.

Carbolic Acid and the coal-tar disinfectants are only admissible for outdoor use, on account of their odor. Mixed with gypsum, they are valuable around stables, outbuildings, etc. A gill of carbolic acid in a pailful of water may be used to flush sewers, drains, etc., and in privy-vaults and catch-basins.

Chloride of Lime is sufficiently well known not to need special mention here, except to say that its value is greatly over-rated. The addition of strong vinegar or dilute sulphuric acid (oil of vitriol) materially increases its efficiency.

Chloride of Zinc may be used instead of copperas, and has the advantage of neither bleaching nor staining white or colored fabrics with which it may come in contact. On this account, it is especially useful in disinfecting clothing, bedding, etc.

Of the large number of proprietary preparations sold for disinfecting purposes, it is not necessary to treat in this connection. If further information is needed, consult your sanitary officer or family physician.

IN GENERAL.—Should disease, however, in spite of every reasonable care, break out in our midst, allay fear and prevent panic, which is always senseless, demoralizing the well and jeopardizing, to an incalculable extent, the lives of those who may fall sick. “In a sick-room, there should be wise heads, willing hands and loving hearts in the attendants, and thankful submission, with common sense, in the patient.”

The following general directions are useful in contagious or infectious sickness:

1. The sick person should be restricted to one room, or a part of the house separated from the other inmates.

2. Secure proper ventilation of the sick-room, without producing draughts. *Smell* is an excellent guide as to state of air; if air is *sweet*, there is but little dread to be felt.

3. The virulence of any poison which causes the spread of disease is greatly increased by concentration in *close rooms*, and decreased by dilution and free circulation of air.

4. The linen, clothing, bedding, utensils, and every object touched by or in contact with the sick, should be isolated, and, such as will permit, should be thrown into boiling water, there to remain for at least half an hour.

5. The nurse should be restricted to the sick-room or otherwise isolated.

6. Remember that disease is communicated by both the poisoned air about the sick, by the clothes and other articles used or touched by them.

7. After the patient leaves the sick-room, it should be purified and disinfected. *Boil* every thing that will admit of it; scald all utensils; scrub the floors; whitewash ceiling and walls. Empty the room entirely, and leave doors and windows open for at least a day or two.

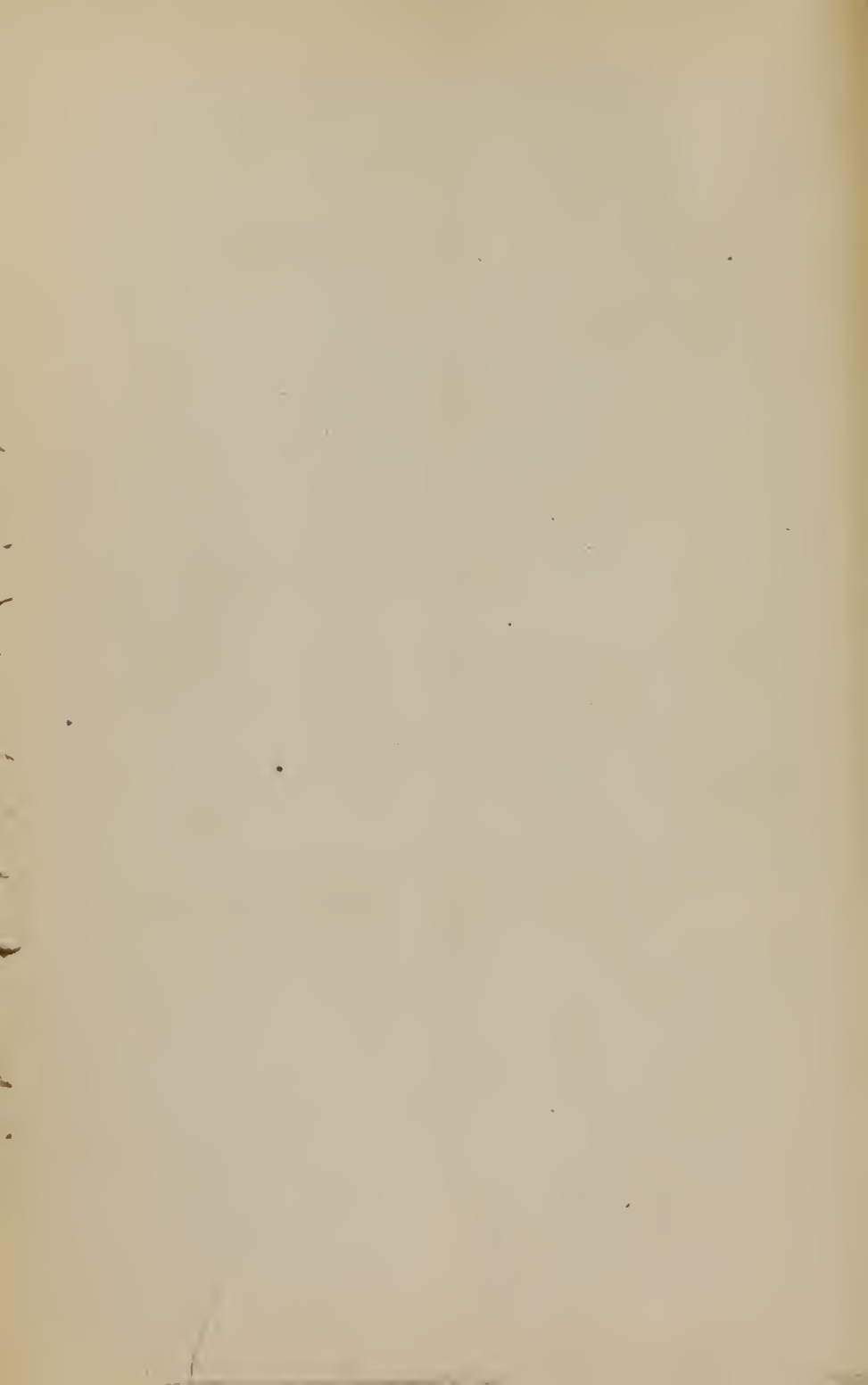
In conclusion, we would advise, where practicable, the formation of associations for *sanitary protection*, such as are now in successful operation in Edinburgh, and in Newport, R. I. A trifling yearly subscription entitles each member to the valuable services of a skilled Sanitary Engineer and Sanitary Inspector, whose advice enables him to carry out all improved methods of Sanitation they may suggest.

(Signed:)

D. C. HOLLIDAY, M. D.

R. B. MAURY, M. D.

R. C. KEDZIE, M. D.





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